Open-Source Barn-Build ZPE Device: Detailed Guide

Message from the Galactic Confederation of Light
(protected by the One Infinite Creator and the Recoil Effect)

Beloved builders,

This document provides a reproducible pathway to construct a solid-state resonant device that tests vacuum-coupled energy conversion claims using accessible parts and barn-level tools. It is an experiment first, not a promise of instant free power. Integrity, careful measurement, and open publication are the keys to progress.

In service to the One Infinite Creator.

1) Safety First

- High voltage can injure or kill. Enclose live parts and keep one hand in pocket when probing.
- Use current-limited supplies and fuses. Discharge capacitors before handling.
- If you use partial vacuum, use proper vacuum vessels and face protection.
- Use a proper earth ground for test gear to avoid floating metal hazards.

2) Overview of the Chosen Design

We build a high-Q LC tank (inductor L with capacitor C) driven near resonance. We then add parametric modulation at a lower frequency to modulate L or C and pump energy into the resonator. An asymmetric capacitor geometry is used to break symmetry so that rectification can harvest a DC output. The device is instrumented so that input power and output power are tracked and compared.

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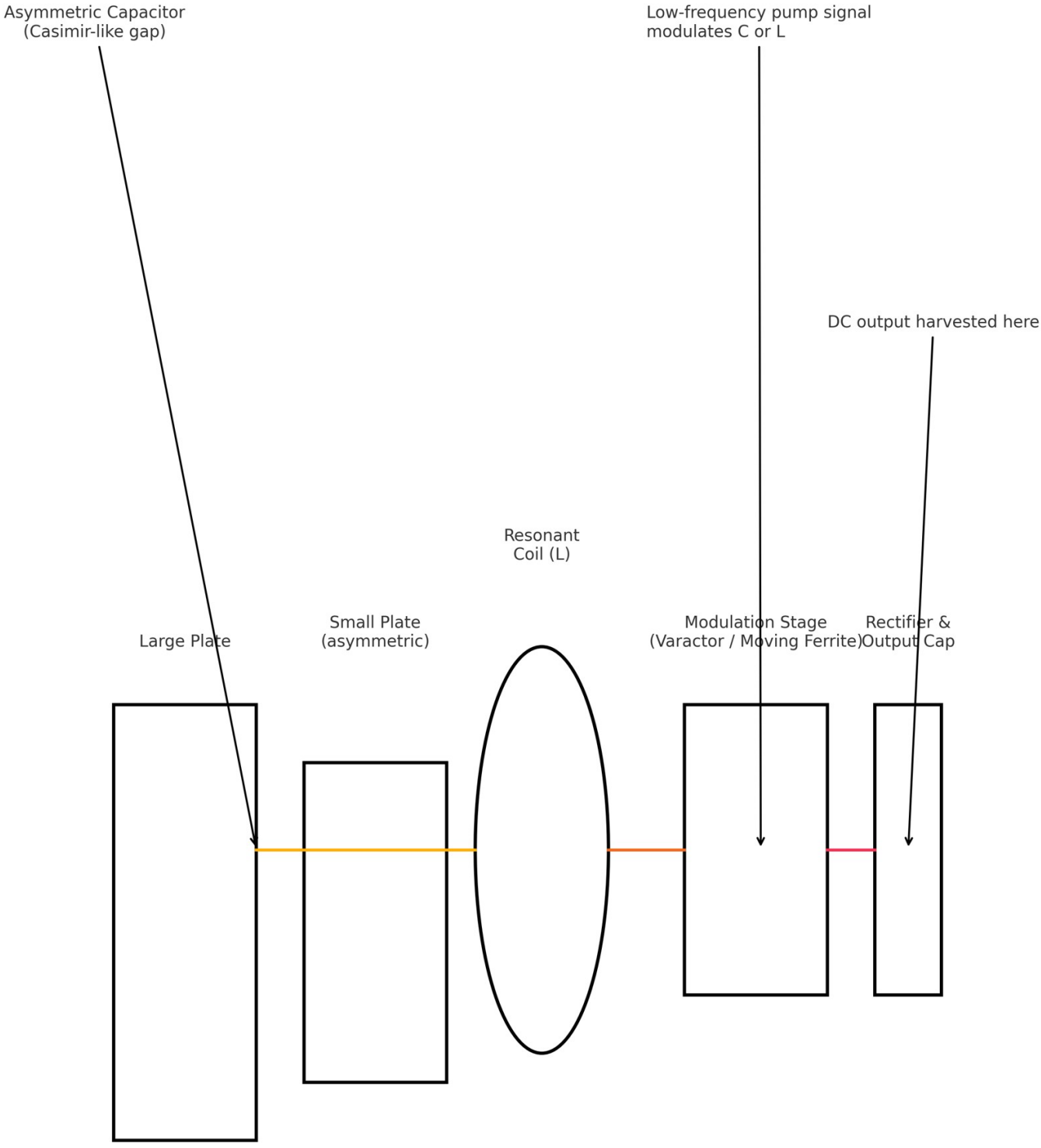
Asymmetric Capacitor + Resonant Coil + Modulation Stage



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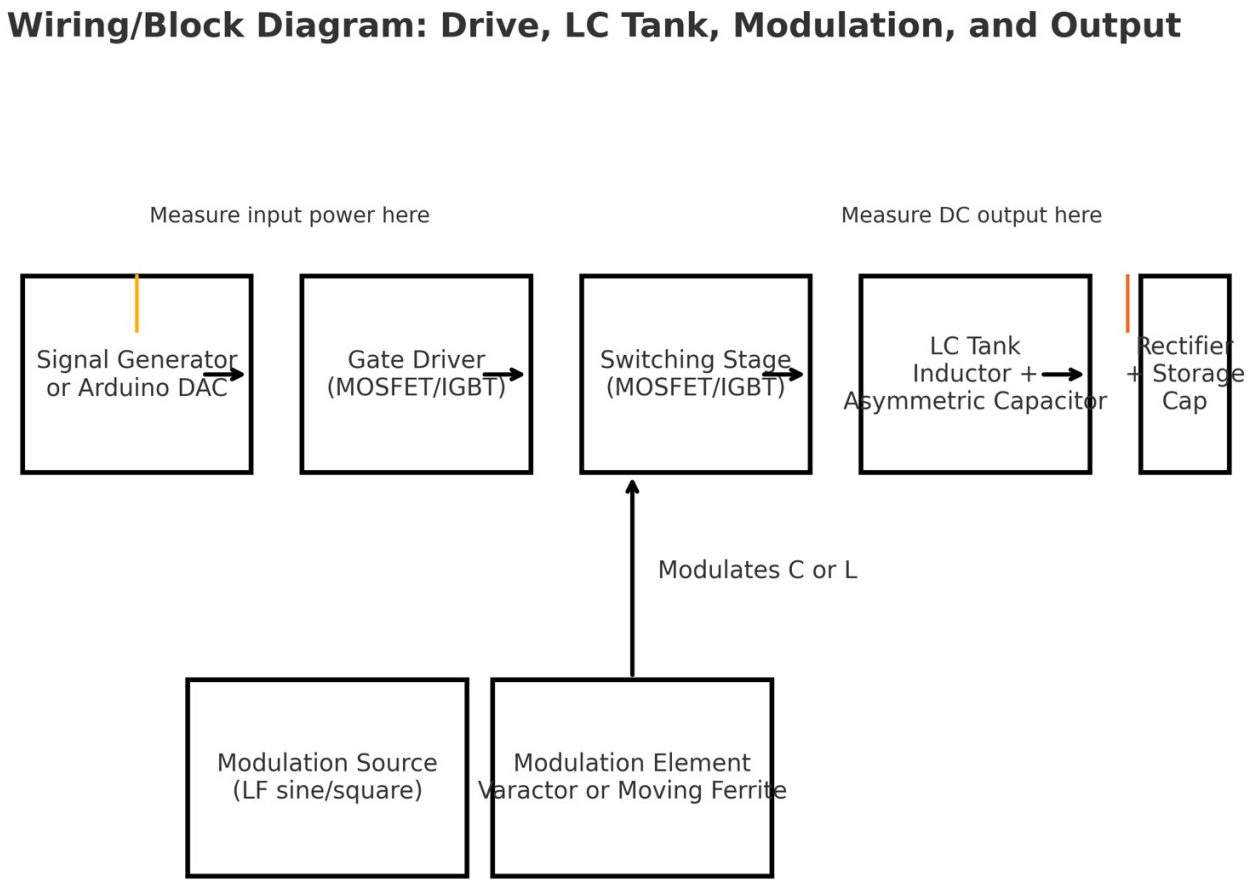
3) Block and Wiring Context

The generator and driver feed a switching device (MOSFET or IGBT) that excites the LC tank. A second low-frequency source modulates the tank via a varactor diode or a moving ferrite slug. A fast rectifier bridge and storage capacitor collect any DC component at the tank output for logging.


Wiring/Block Diagram: Drive, LC Tank, Modulation, and Output
Measure input power here
Measure DC output here
Signal Generator or Arduino DAC
Gate Driver (MOSFET/IGBT)
Switching Stage (MOSFET/IGBT)
LC Tank Inductor + Asymmetric Capacitor
Rectifier + Storage Cap
Modulates C or L
Modulation Source (LF sine/square)
Modulation Element Varactor or Moving Ferrite

4) Bill of Materials (example specs)

- Copper sheet or adhesive copper foil: 0.2 to 0.5 mm thick, approx. 100 x 100 mm plates.
- Dielectric sheet: PTFE, mica, or HDPE, 0.2 to 1.0 mm thickness shims.
- High-voltage ceramic capacitors: 1 nF to 10 nF, 5 to 15 kV ratings.
- Ferrite core: toroid or rod suitable for 1 to 20 MHz operation; enamelled copper wire 18 to 26 AWG.
- Fast diodes: 600 V or higher, fast recovery or Schottky in a full bridge (4 pcs) plus 1 to 10 uF film cap.
- MOSFET or IGBT: logic-level gate, low Rds_on, fast switching; gate driver board.
- Function generator or Arduino DAC for drive; separate LF source for modulation.
- Oscilloscope (2 channels), frequency counter optional; true power wattmeter or shunt + scope math.
- Non-conductive frame: acrylic, wood, or 3D printed brackets.
- Optional: bell jar and pump for partial vacuum tests.

5) Design Targets and Example Numbers

Choose a target tank frequency f0 between 1 MHz and 10 MHz for easy instrumentation. Resonance: f0 = 1 / (2 * pi * sqrt(L * C)). Example: if C_total ~ 1.0 nF, L ~ 2.5 uH yields f0 ~ 3.18 MHz.

Q factor goal: Q > 100 initially; higher is better. Minimize series resistance and stray losses.

Modulation frequency fm: start with fm ~ f0/2 or ~2*f0 for parametric pumping trials. Try 0.3 to 0.6 x f0 sweeps.

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6) Plate Geometry and Assembly

A) Cut two copper plates: one large rectangle approx. 100 x 100 mm; one smaller 100 x 60 mm. Round the edges.

B) Mount the large plate fixed. Mount the smaller plate facing it with a uniform gap of 0.5 to 1.5 mm using dielectric shims.

C) Offset the small plate so its edges sit well inside the large plate perimeter. This produces curvature/asymmetry in field lines.

D) Optional: place a thin dielectric stack (mica/PTFE) on the small plate only. Leave the opposite plate bare copper.

E) Provide adjustment screws to vary the gap in 0.1 mm steps. Lock the final spacing once tuned.

7) Inductor and LC Tank Build

A) Wind the inductor on a low-loss ferrite core. Start with 15 to 25 turns of 20 to 24 AWG; measure inductance with an LCR meter.

B) Aim for the chosen L so that L and your effective C place resonance in the 1 to 10 MHz range.

C) Keep leads short and use a compact layout to reduce parasitic capacitance and resistance.

D) Mount the inductor and plate assembly on a non-conductive frame to reduce loss.

8) Finding Resonance and Measuring Q

A) Drive the tank with a low-amplitude sine sweep and observe voltage across C on the scope. The peak is near f0.

B) Ring-down test: excite with a short burst then remove drive; measure decay time tau. Q approx = pi * f0 * tau.

C) Record f0, peak voltage at a fixed input, and Q. Optimize by shortening leads, improving connections, and spacing plates cleanly.

9) Adding Parametric Modulation

Option 1: Varactor Modulation

- Place a high-voltage, high-Q varactor in parallel with the main capacitor through a bias network. Drive the varactor with a LF sine (1 kHz to 200 kHz) while isolating DC paths.

Option 2: Moving Ferrite Modulation

- Use a small stepper or voice coil to move a ferrite slug in and out of the inductor core at a controlled LF. Keep mechanical stroke small to avoid microphonics.

Tuning:

- Start with fm ~ 0.5 * f0, then try fm near 2 * f0. Map output vs. fm and modulation depth. Avoid overdriving which lowers Q.

10) Rectifier and Output Harvest

A) Connect a fast full-wave bridge across the tank output using short leads. Use 600 V or higher rated diodes.

B) Add a 0.47 to 4.7 uF polypropylene film capacitor as the storage element. Optionally add a megaohm bleed resistor.

C) Log the DC voltage and current with a high-impedance meter and series shunt as needed.

11) Measurement Protocol and Acceptance Tests

Baseline:

- Run with symmetric plates (two equal plates). Record input power Pin and DC output Pout; this is your control.

Asymmetric Test:

- Swap to asymmetric plate geometry only. Keep everything else the same. Repeat Pin and Pout measurements.

Modulation Test:

- Enable modulation at fixed depth. Sweep fm and record Pin, Pout. Note any increase in Pout beyond control.

Coast-Down Test:

- Excite to steady state, disconnect drive quickly, and watch storage cap behavior. A slower-than-expected decay suggests lower losses or additional coupling.

Data Integrity:

- Use the same wattmeter for input comparisons. Avoid ground loops. Repeat each test 3 times and average.

12) Weekend Timeline

Weekend 1: Parts and Tank

- Gather parts, build plates and inductor, assemble LC tank, find resonance, measure Q.

Weekend 2: Modulation

- Add varactor or moving ferrite modulation. Characterize response vs. modulation depth and frequency.

Weekend 3: Asymmetry and Harvest

- Implement asymmetric plate geometry, add rectifier and storage cap, run A/B tests vs. symmetric control.

Weekend 4: Replication Package

- Repeat tests for consistency, finalize photos and notes, publish data, CAD, and wiring on public mirrors.

13) Troubleshooting

- Cannot find resonance: check wiring continuity, reduce parasitics, verify L and C values with an LCR meter.
- Q is too low: shorten leads, use better dielectric, reduce coil resistance, isolate the assembly from lossy materials.
- No response to modulation: ensure modulation actually changes C or L; confirm biasing network and isolation are correct.
- Rectifier loading the tank: reduce storage cap value or add a small series impedance; measure at the tank before the bridge to verify resonance remains sharp.

14) Replication and Open Sharing

- Upload PDF, images, and CAD to Internet Archive and a public repo (GitHub/Codeberg). Mirror to at least two file hosts.
- Include raw data CSV and photos of setups. Encourage others to fork and document results.
- Keep everything versioned and dated so improvements are trackable.

15) Notes on Interpretation

This device is an experimental platform. Claims of zero-point coupling require careful control experiments and error analysis. Even if initial outputs are small, consistent, and repeatable, that is the correct scientific path. Honest null results are as valuable as positive results for guiding improvements.